SPECIES FACT SHEET

Scientific Name: *Megomphix lutarius* Baker, 1932
Common Name: Umatilla Megomphix
Phylum: Mollusca
Class: Gastropoda
Order: Stylommatophora
Family: Megomphicidae

Taxonomic Note:
Megomphix lutarius was originally described by H.B. Baker in 1932. Henderson (1936) considered it a subspecies of *M. hemphilli*. Pilsbry (1946) and Turgeon *et al.* (1998) recognize *M. lutarius* as a full species.

Conservation Status:
Global Status: G1 (2010)
National Status: United States N1 (2002)
State Statuses: Washington SH, Oregon SH
(NatureServe 2015)

IUCN Red List – NE (Not Evaluated)

Technical Description:
Adult: The *Megomphix* shell-form is a dextral (right hand) spiral, meaning if the side of the shell is viewed and the dorsal side is up, then the aperture or "mouth" will be on the right side (Applegarth 2000). Burke (2013) and Burke (in Jepsen *et al.* 2012) describes *Megomphix lutarius* shells as 9.0 to 11.5 mm wide (but one collection 12.4 mm wide) and 4.6 to 5.15 mm high, smaller than other members of the genus in the West (*M. hemphilli* and *M. californicus*). The shell is thin, discoidal with a low spire, and opaque/white with a green tint. The umbilicus is considered wide, approximating one-third shell width, and funnelform. The shell aperture is "widely lunate, slightly oval and a little oblique" and the lip "is simple, the basal area flattened somewhat" (Burke 2013). Whorls regularly expand, totaling 5 to 5.5, with the last whorl typically less than twice as wide as the adjacent whorl and having a rounded periphery (Burke in Jepsen *et al.* 2012; Burke 2013). However, recent collections from the Wallowa-Whitman National Forest include specimens in which the last whorl is greater than, equal to or less than the width of the penultimate whorl. These specimens are also smaller than the average adults of the species (Burke 2016, *pers. comm.*).

M. lutarius may be further distinguished in appearance from other species of *Megomphix* by the presence of fine spiral striae and growth wrinkles on the teleoconch, which Burke (in Jepsen *et al.* 2012) describes as giving the shell a "satiny texture." These striae may be particularly difficult to see on more

weathered specimens, as with those recently collected from the Wallowa-Whitman National Forest (Burke 2016, *pers. comm.*). Recently collected specimens from the North Fork John Day are described as having a low, convexly-conic spire, tightly coiled whitish-horn or translucent white shells, and white body and sole with blue-gray tentacle retractors. Although shells are typically not glossy (Burke 2013), one shell is reported as very glossy with wavy spiral striae (Burke in Jepsen *et al.* 2012). Haplotrematid snails may look similar but have whorls that expand at a greater rate and have basal lip margins that are more rounded. *Microphysula ingersolli* may also appear similar, but the aperture is narrower and the shell more transparent (Burke 2013). Location of collection can be used to aid in identification of weathered or atypical specimens, given the disjunct distribution of the three species of *Megomphix* (Burke 2016, *pers. comm.*).

Immature: Live specimens of immature *M. lutarius* have not been described, although a juvenile shell was collected by Jepsen *et al.* (2012) and described by Burke as having 3.5 whorls, appearing smooth but with faint spiral striae and growth wrinkles beginning in the second whorl.

Eggs: Eggs of *M. lutarius* have not been described.

Life History:

Little is known regarding the life history of *M. lutarius*, as it has been observed only infrequently. *Megomphix* are likely hermaphroditic like other Pacific Northwest terrestrial snails; however, PNW species typically mate with other individuals rather than self-fertilize, likely advantageous in protecting the species from inbreeding while maximizing potential for reproduction (Burke *et al.* 2005). Although eggs have not been observed for this species, most PNW terrestrial snails are oviparous (Burke 2013). Frest (in Applegarth 2000) speculates that *M. hemphilli* lifespan may be two years, but there are no published observations of lifespan for *M. lutarius*.

Nothing has been reported regarding the feeding habits of this or other *Megomphix* species, although terrestrial gastropods may be herbivorous or omnivorous and predators or scavengers (Burke 2013). *Polygyrella polygyrella*, another megomphicid, is thought to feed on algae, yeast, bacteria and diatoms scraped from rock, wood, and plant surfaces (Duncan 2008).

Range, Distribution, and Abundance:

Range: The range of this species is disjunct from the ranges of other *Megomphix* species and appears restricted to areas within the Blue Mountains (Burke 2013). Frest and Johannes (1995) suggest that the species may have once been more widely distributed. Unlike *M. hemphilli*, which is reported from hundreds of sites in Oregon and a number of sites in Washington (Foltz Jordan 2014), *M. lutarius* has only been reported from sites in Walla Walla County, Washington

(Baker 1932), Umatilla County, Oregon (Baker 1932; California Academy of Sciences; Jepsen *et al.* 2012), and Union County, Oregon (Xerces Society, in prep).

Distribution: The species' current distribution is unclear. Recent mollusk surveys in the Blue Mountains (Frest & Johannes 1995; Jepsen *et al.* 2011, 2012; Burke 2013; Xerces Society, in prep) have resulted in observations along the North Fork John Day River (Jepsen *et al.* 2012) and near North Fork Indian Creek in Oregon (Xerces Society, in prep). *M. hemphilli* is reported as having a patchy distribution throughout its range (Applegarth 2000), and the same appears to hold for *M. lutarius*.

BLM/Forest Service Land: This species is documented on the Umatilla National Forest in Oregon and the Wallowa-Whitman National Forest in Oregon. It is suspected on the Umatilla National Forest in Washington. It is suspected on the BLM Vale and Prineville Districts due to the close proximity (<0.25 miles and <8 miles, respectively) of BLM lands adjacent to the North Fork John Day Site 1 collection. It is also suspected on the BLM Spokane District based on collection near Walla Walla.

Abundance: Abundance estimates are not available for this species, which was thought possibly extinct until 2012, when it was collected in the vicinity of the North Fork John Day River in Oregon. Four shells were recovered at the first site while seven shells and one live animal were recovered at the second. In 2016, one live animal and 12 shells were collected from the Wallowa-Whitman National Forest (NF). Similarly, many records for *M. hemphilli* include only a single specimen (Foltz Jordan 2014).

Generally, few other mollusk species are observed at *M. lutarius* sites; no other species were located at one of the Umatilla NF sites, and only two other species were located at the second (Jepsen *et al.* 2012). On the Wallowa-Whitman NF, three species were identified at the same site as *M. lutarius* (Xerces Society, in prep). With so few sites it is difficult to interpret either abundance or relative abundance of *M. lutarius*.

Habitat Associations:

The species was originally reported from "an almost vertical, lava exposure, overgrown with dry moss, ferns and scattered bushes, below north-facing slope with Douglas fir (*Pseudotsuga*)" (Baker 1932). The elevation was greater than 2000 ft., and specimens were reported aestivating under 2-5 inches of "yellowish dust and dirt in hollows of the outcropping ledges" near a mostly dry creek bed (Baker 1932). More recently, the species was collected along the North Fork John Day River in Oregon at rock outcrops and talus with ponderosa pine and shrubs between 2900 and 3000 ft. (Jepsen *et al.* 2012). The species has also recently been collected downslope from a gravel road in

full sun with cherty/platy loose rock at 4960 ft. (Xerces Society, in prep). Frest and Johannes (1995) suggest that *Megomphix* species are rare and have restricted distributions, limited to intact forest and riparian areas. The species is likely mesophilic and lives in mesic conditions. Other *Megomphix* species seem to prefer "moist valley, ravine, gorge, or talus sites, i.e. low on a slope and near permanent or persistent water, but not normally subject to regular or catastrophic flooding" (Frest & Johannes 1995).

Taxa reported with the species at the type locality include *Cryptomastix, Microphysula, Haplotrema, Anguispira, Radiodiscus abietum, Discus whitneyi, Pristiloma idahoense,* and *Ogaridiscus subrupicola* (Baker 1932). Other species reported from sites with recent *M. lutarius* collections include *Deroceras reticulatum*, *Vitrina pellucida*, *Microphysula ingersolli*, and *Euconulus fulvus* (Jepsen *et al.* 2012; Xerces Society, in prep). Another species, possibly *Zonitoides* sp., but awaiting identification, was also collected at one site (Xerces Society, in prep).

Threats:

Terrestrial mollusks are sensitive to activities that disturb the terrain and plant community, especially those that alter temperature or humidity or result in the compaction of soil or loss of debris and rock microsites. Fire, especially prescribed burning, may reduce abundance and species richness of terrestrial mollusk populations, and roads can be barriers to mollusk dispersal (Foltz Jordan & Hoffman Black 2012). Frest and Johannes (1995) list intense logging and grazing as threats to the species.

Conservation Considerations:

Research: Additional study of the species at the recent North Fork John Day and North Fork Indian Creek collection sites is recommended to determine current population status and habitat conditions and requirements. Little is known regarding life history, which could aid in identifying limiting factors and developing habitat management guidelines. In addition, reports of *Megomphix* collections often include a number of empty shells (Applegarth 2000; Jepsen *et al.* 2012; Foltz Jordan 2014; Xerces Society, in prep). Better understanding of population fluctuations would also improve understanding of extinction risk.

Inventory: Surveys for this species are recommended, particularly at the type locality, to determine the species' current status. Terrestrial mollusk surveys across the Blue Mountains region are recommended to aid in determining the species' extant range.

Management: Management for this and other terrestrial snails should aim to protect and (where needed) improve existing habitat conditions. Forest management activities and general recommendations to protect terrestrial mollusks are reviewed in detail in Foltz Jordan & Hoffman Black (2012).

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Date: June 2016

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Conservation Planning Coordinator
Date: August 2016

ATTACHMENT 1: References
ATTACHMENT 2: List of pertinent or knowledgeable contacts
ATTACHMENT 3: Map of species' occurrence
ATTACHMENT 4: Photographs of this species and habitat
ATTACHMENT 5: Terrestrial Gastropod Survey Protocol, including specifics for this species

ATTACHMENT 1: References

Applegarth, J. 2000. Management recommendations for terrestrial mollusk species. Megomphix hemphilli, the Oregon Megomphix, with contributions by P. Jeske and N. Duncan. Version 2.0. Unpublished report to the Oregon Bureau of Land Management. 39 pp.

Baker, H.B. 1932. New Land Snails from Idaho and Eastern Oregon. The Nautilus 45:82–87.

Burke, T.E. 2013. Land Snails and Slugs of the Pacific Northwest. Corvallis: Oregon State University Press. 344 pp.

Burke, Tom. 2016. Personal communication with Emilie Blevins.

Burke, T., Duncan, N., Jeske, P., and T. Kogut. 2005. Conservation assessment for *Cryptomastix devia,* Puget Oregonian. Originally issued as Management Recommendations in 1999. Revised in 2005. USDA Forest Service Region 6 and USDI Bureau of Land Management, Oregon and Washington.

Duncan, N. 2008. Species fact sheet for *Polygyrella polygyrella.* Prepared for the Interagency Special Status / Sensitive Species Program (ISSSSP). Available

at: http://www.fs.fed.us/r6/sfpnw/issssp/species-index/fauna-invertebrates.shtml (Accessed 27 Sept 2013).

Foltz Jordan, S. 2014. Species fact sheet for Megomphix hemphilli. Prepared for the Interagency Special Status / Sensitive Species Program (ISSSSP). Available at: http://www.fs.fed.us/r6/sfpnw/issssp/species-index/fauna-invertebrates.shtml (Accessed 16 June 2016).

Foltz Jordan, S. and S. Hoffman Black. 2012. Effects of Forest Land Management on Terrestrial Mollusks: A Literature Review. The Xerces Society for Invertebrate Conservation under an Agreement with the Interagency Special Status and Sensitive Species Program USDA Forest Service, Region 6 and USDI Oregon/Washington Bureau of Land Management.

Frest, T.J. and E.J. Johannes. 1995. Interior Columbia Basin Mollusk Species of Special Concern, Final Report. Contract #43-OEOO-4-9112. Prepared for: Interior Columbia Basin Ecosystem Management Project. Deixis Consultants. Seattle, WA.

Henderson, J. 1936. The non-marine Mollusca of Oregon and Washington — supplement. University of Colorado (Boulder), Studies, 23(4):251-280.

Jepsen, S., A. Carleton, S. Foltz Jordan, and T.E. Burke. 2012. Spring 2012 Blue Mountains Terrestrial Mollusk Surveys. Final Report to the Interagency Special Status/Sensitive Species Program (ISSSSP). The Xerces Society for Invertebrate Conservation.

NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://explorer.natureserve.org. (Accessed: May 2, 2016).

Pilsbry, H.A. 1946. Land Mollusca of North America (north of Mexico). Academy of Natural Sciences (Philadelphia, PA), Monograph number 3, 2(1):1-520.

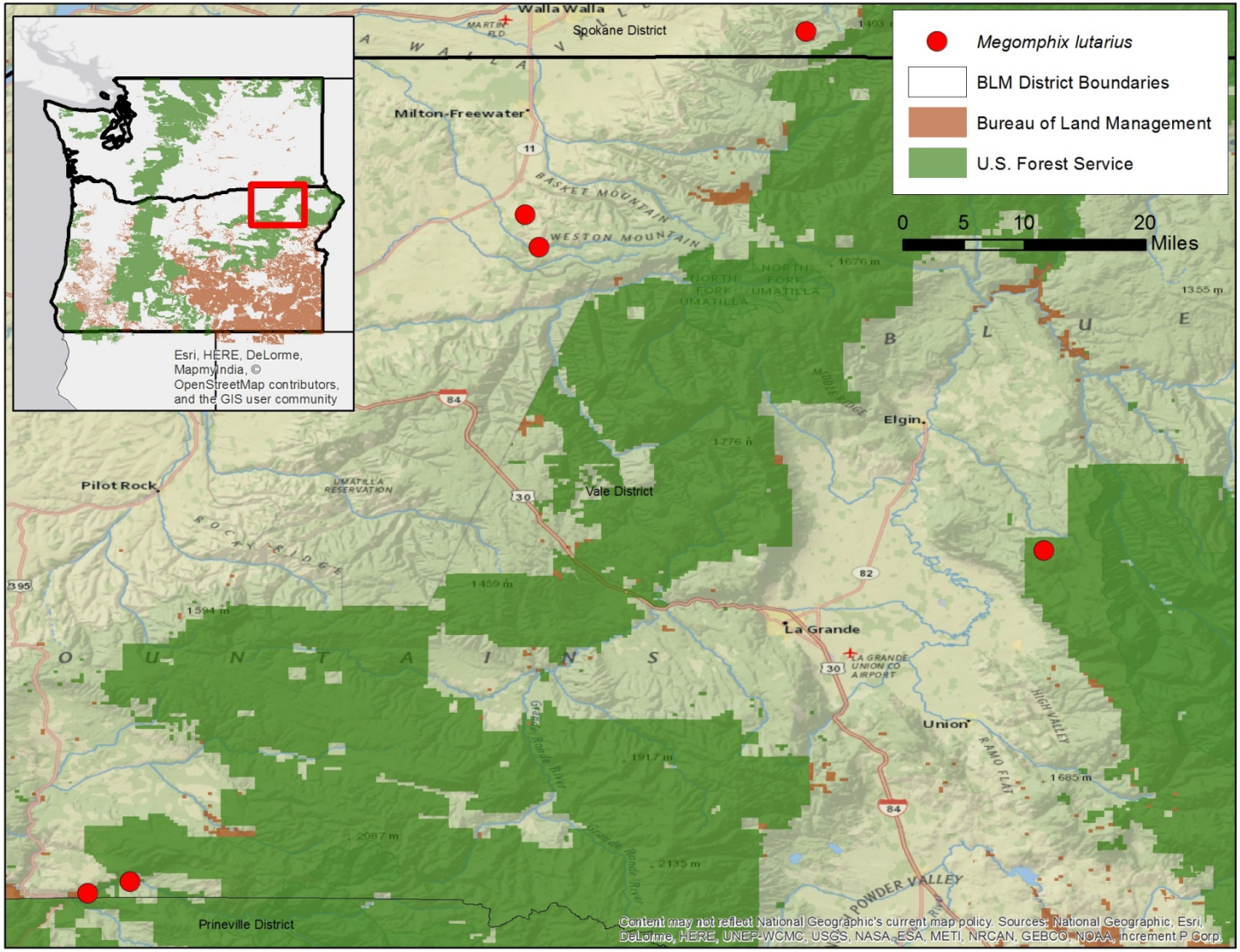
Turgeon, D.D., A.E. Bogan, E.V. Coan, W.K. Emerson, W.G. Lyons, W.L. Pratt, C.F.E. Roper, A. Scheltema, F.G. Thompson, and J.D. Williams. 1998. Common and scientific names of aquatic invertebrates from the United States and Canada: Mollusks, 2nd ed. American Fisheries Society Special Publication.

Xerces Society. In prep. Collection records from spring 2016 terrestrial mollusk surveys on the Wallowa-Whitman National Forest for submission to the Interagency Special Status / Sensitive Species Program.

ATTACHMENT 2: List of pertinent or knowledgeable contacts

Tom Burke, Private Consultant, Ellensburg, Washington.
Sarina Jepsen, Xerces Society, Portland, Oregon.
John Applegarth, Private Consultant, Eugene, Oregon.
Ed Johannes, Deixis Consultants, Seattle-Tacoma, Washington.
Barry Roth, Private Consultant, San Francisco, California.

ATTACHMENT 3: Map of species' occurrence



ATTACHMENT 4: Photographs of this species and habitat

Photographs of *Megomphix lutarius* © Tom Burke. Used with permission.

Photographs of *Megomphix lutarius* habitat on the Umatilla National Forest, North Fork John Day Ranger District, Umatilla County, OR. Specimens were collected in May 2012 under rocks pictured here. Photos by Sarina Jepsen © Xerces Society.

Photographs of *Megomphix lutarius* habitat on the Wallowa-Whitman National Forest, La Grande Ranger District, Union County, OR. Specimens were collected in May 2016 under rocks pictured here. Photos by Emilie Blevins © Xerces Society.

ATTACHMENT 5: Terrestrial Gastropod Survey Protocol, including specifics for this species

Survey Protocol

Taxonomic group:
Terrestrial Gastropoda

Please refer to the following documents for detailed mollusk survey methodology:

1. General collection and monitoring methods for aquatic and terrestrial mollusks (pages 64-71):

> Frest, T.J. and E.J. Johannes. 1995. Interior Columbia Basin mollusk species of special concern. Final report: Interior Columbia Basin Ecosystem Management Project, Walla Walla, WA. Contract #43-0E00-4-9112. 274 pp. plus appendices.

2. Pre-disturbance surveys for terrestrial mollusk species, the objective of which is to establish whether a specific mollusk is present in proposed project areas with a reasonable level of confidence, and to document known sites discovered during surveys:

> Duncan, N., T. Burke, S. Dowlan, and P. Hohenlohe. 2003. Survey protocol for survey and manage terrestrial mollusk species from the Northwest Forest Plan. Version 3.0. U.S. Department of Interior, Bureau of Land Management, Oregon/Washington and U.S. Department of Agriculture, Forest Service, Region 6, U.S. Fish and Wildlife Service. 70 pp. Available at: http://www.blm.gov/or/plans/surveyandmanage/files/11-mollusks_v3_enclosed2.pdf

3. Inventory information for terrestrial mollusk site surveys:
    - Inventory and Monitoring protocol page, with NRIS/Geobob field forms. Available at: http://www.fs.fed.us/r6/sfpnw/issssp/inventories/monitoring.shtml
    - ID services page, with current versions of field tags. Available at: http://www.fs.fed.us/r6/sfpnw/issssp/inventories/identification.shtml
    - Hendricks, P. and B.A. Maxell. 2005. USFS Northern Region 2005 land mollusk inventory: a progress report. Report submitted to the U.S. Forest Service Region 1. Montana Natural Heritage Program

(Agreement #05-CS-11015600-033, Helena, Montana. 52 pp. Available at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5130938.pdf

Species-specific Survey Details:
Megomphix lutarius

How: Hand collection in the appropriate habitat is the recommended survey method for this species. The following survey methodology (adapted from Jepsen *et al.* 2012) is recommended for this species:

Visit survey areas during appropriate season(s). Seek out key habitat features known to be utilized by the target species (e.g., rock outcrops and talus within ponderosa pine or Douglas-fir habitat) while driving or hiking in a selected area. Survey promising areas by looking under loose rocks near outcrops or in talus habitat and in crevices or hollows under soil and between rocks. Record geographic coordinates for each site surveyed. Standardized abundance estimates for this species at new and known sites would assist future conservation efforts, since population size is important in evaluating the stability of a species at a given locality.

Between 15 and 20 minutes search time per person should be spent at each site, although the total time spent at each site may vary based on findings. If 15 to 20 minutes are spent searching for mollusks without finding additional species during that time period, surveyors may move on to a new site.

When mollusks are observed, collect any necessary voucher specimens (shells and live snails) in small vials or recycled yogurt containers and keep in a cooler with ice. Shells should be carefully wrapped in materials from the field site (moss, leaf litter) or some other material such as paper towels to ensure they are not broken in transit. Wrap ice in the cooler with a towel and avoid putting snails directly on the ice; snails may go into aestivation if they become too cold. In the evenings, drown live snails in vials of water overnight or up to 52 hours in the case of some large-bodied snails to ensure appropriate relaxation. Powdered menthol (equivalent of two crystals) can be added to water-filled vials containing slugs and large snails to speed up the relaxing process. For surveys requiring only DNA preservation, place specimens directly in 95% ethanol. For surveys requiring only anatomical examination, transfer specimens from water to a solution of 40% ethanol for at least 24 hours and then a final 80% ethanol solution. Borax powder can also be added to the 80% solution to buffer and protect shells.

If preservation of tissue for both DNA and anatomical surveys is required, it may be necessary to split live-collected specimens into two collections (one in 95% ethanol and one following the 80% ethanol protocol), as the species may be too small for tail clips. Note that this would require verification of species identity preserved using each method. Identification of this taxon is based on shell features, as discussed in the species fact sheet. As expert identification is recommended, this may require shipment of live animals to the expert. Following Duncan *et al.* (2003):

> Washed film canisters make excellent temporary containers for voucher specimens. Shells should be protected from breakage with paper towel or tissue paper. Proper handling of live animals, especially slugs, is important to prevent deterioration during transport. Always keep live specimens cool and moist, and include moist, unbleached paper toweling with the specimen. An insulated cooler with ice is recommended for carrying containers of live animals during hot weather. Most live specimens can be stored in containers in a refrigerator for short periods, however the sooner a specimen is processed, the better condition it will be in. Live specimens may be sent by overnight mail to the regional taxa specialist in airtight containers using insulated mailing boxes if the weather is cool, or delivered in person. Always contact the taxa specialist ahead of time to receive live specimens. A PowerPoint presentation is available on the ISSSSP website that shows how to pack and ship live snails. Available at: http://www.fs.fed.us/r6/sfpnw/issssp/inventories/identification.shtml

Where: *Megomphix lutarius* is known only from Oregon and Washington, in the vicinity of Walla Walla, Washington and in Umatilla and Union Counties, Oregon (Burke 2013; Xerces Society, in prep). The species was collected in 2012 near the North Fork John Day River (Umatilla National Forest; Jepsen *et al.* 2012) and in 2016 near North Fork Indian Creek (Wallowa-Whitman National Forest; Xerces Society, in prep); it was not recovered during recent surveys at other sites in the region (Frest & Johannes 1995; Jepsen *et al.* 2011; Burke 2013) and likely has a highly fragmented distribution. The species' current status at the type locality ("about 5 miles above Weston, a few feet from the dry bed of Pine Creek"; Baker 1932) is unknown as it is located on private land and has not been resurveyed (Jepsen *et al.* 2012).

Descriptions of habitat from historic and recent collections include under soil downslope from vertical lava exposures with Douglas-fir, dry moss, ferns, and shrubs at 2000 ft. elevation (Baker 1932); along the North Fork John Day River in Oregon at rock outcrops and talus with ponderosa pine and shrubs between 2900 and 3000 ft. (Jepsen *et al.* 2012); and under damp cherty/platy rock downslope of a road in an exposed patch within designated old growth forest.

Frest and Johannes (1995) suggest that *Megomphix* species are limited to intact forest or riparian areas and that *M. lutarius* is likely mesophilic and lives in mesic conditions. Frest and Johannes (1995) also report that other *Megomphix* species seem to prefer "moist valley, ravine, gorge, or talus sites, i.e. low on a slope and near permanent or persistent water, but not normally subject to regular or catastrophic flooding."

When: Terrestrial mollusks of the Interior Columbia Basin are best surveyed for in the spring, from April to May following snowmelt or from September to November after the onset of rain but before the first heavy freeze (Frest & Johannes 1995). Duncan *et al.* (2003) suggests a general set of guidelines for fall surveys:

> 1) autumn rains have soaked the ground (i.e.,generally after at least three days of moderate to heavy rains), and 2) the soil is wet to a 1" depth or morning dew or frost is present (in areas or years in which autumn rains may not occur before the ground freezes). Surveys may continue into the late fall or early winter until 1) soil temperatures fall below 0°C (32°F) and remain below 2°C (36°F) (under the canopy) for three consecutive days (i.e. when there is a constant period of three or more days of cold temperatures), or 2) the ground is frozen, or 3) snow prevents a reasonable search. Survey conditions are still within protocol if soil temperatures drop below 2°C (36°F) during the night and rise again during the day.

Likewise, spring surveys may resume:

> after 1) the snow has melted and the ground is thoroughly thawed and 2) the soil temperature remains above 5°C (40°F) for at least three consecutive days. A slightly higher temperature threshold is considered necessary in the spring in order to compensate for the need for animals to become active after a long dormant period and also to allow time for new hatchlings to emerge. Surveys may continue into early summer until 1) the top half-inch of soil is dry or 2) daytime air temperatures remain above 27°C (80°F) for three consecutive days. Surveys windows may re-open in late spring after dry periods if rainfall is sufficient to moisten the top half-inch of the duff layers (Duncan *et al.* 2003)

The species was reported aestivating in August 2-5 inches under soil (Baker 1932), which likely signals inappropriate survey conditions (Duncan *et al.* 2003). Jepsen *et al.* (2012) collected a single live specimen in May and recommend spring surveys for special status terrestrial mollusk species. May 2016 surveys for special status species on the La Grande District of the Wallowa-Whitman National Forest were also successful at encountering multiple terrestrial mollusk species (Xerces Society, in prep).

References (Survey Protocol only):

Baker, H.B. 1932. New Land Snails from Idaho and Eastern Oregon. The Nautilus 45:82–87.

Burke, T.E. 2013. Land Snails and Slugs of the Pacific Northwest. Corvallis: Oregon State University Press. 344 pp.

Duncan, N., T. Burke, S. Dowlan, and P. Hohenlohe. 2003. Survey protocol for survey and manage terrestrial mollusk species from the Northwest Forest Plan. Version 3.0. U.S. Department of Interior, Bureau of Land Management, Oregon/Washington and U.S. Department of Agriculture, Forest Service, Region 6, U.S. Fish and Wildlife Service. 70 pp. [Available on ISSSSP intranet site].

Frest, T.J. and E.J. Johannes. 1995. Interior Columbia Basin mollusk species of special concern. Final report: Interior Columbia Basin Ecosystem Management Project, Walla Walla, WA. Contract #43-0E00-4-9112. 274 pp. plus appendices.

Hendricks, P. and B.A. Maxell. 2005. USFS Northern Region 2005 land mollusk inventory: a progress report. Report submitted to the U.S. Forest Service Region 1. Montana Natural Heritage Program (Agreement #05-CS-11015600-033, Helena, Montana. 52 pp. Available at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5130938.pdf (Accessed 20 June 2016).

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Jepsen, S., T. Burke, and S. Foltz Jordan. 2011. Final Report to the Interagency Special Status / Sensitive Species Program regarding Surveys for four terrestrial mollusk species on the Umatilla National Forest and Vale District BLM lands. Report submitted to Kelli Van Norman, Interagency Special Status / Sensitive Species Program from The Xerces Society for Invertebrate Conservation.

Xerces Society. In prep. Collection records from spring 2016 terrestrial mollusk surveys on the Wallowa-Whitman National Forest for submission to the Interagency Special Status / Sensitive Species Program.